

This article was downloaded by: [82.196.92.105]

On: 16 July 2015, At: 06:20

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: 5 Howick Place, London, SW1P 1WG



## Democratization

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/fdem20>

### Attitudes towards gender equality and perception of democracy in the Arab world

Veronica V. Kostenko<sup>a</sup>, Pavel A. Kuzmuchev<sup>a</sup> & Eduard D. Ponarin<sup>a</sup>

<sup>a</sup> Higher School of Economics, Laboratory for Comparative Social Research, Moscow, Russian Federation

Published online: 26 Jun 2015.



CrossMark

[Click for updates](#)

To cite this article: Veronica V. Kostenko, Pavel A. Kuzmuchev & Eduard D. Ponarin (2015): Attitudes towards gender equality and perception of democracy in the Arab world, *Democratization*, DOI: [10.1080/13510347.2015.1039994](https://doi.org/10.1080/13510347.2015.1039994)

To link to this article: <http://dx.doi.org/10.1080/13510347.2015.1039994>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

## Attitudes towards gender equality and perception of democracy in the Arab world

Veronica V. Kostenko\*, Pavel A. Kuzmuchev and Eduard D. Ponarin

*Higher School of Economics, Laboratory for Comparative Social Research, Moscow, Russian Federation*

*(Received 24 July 2014; accepted 4 April 2015)*

This article analyses the relationship between support of democracy and attitudes to human rights, in particular, support for gender equality, in the countries covered by the first wave of the Arab Barometer project. We use cluster analysis and negative binomial regression modelling to show that, unlike in most countries of the world, correlation between support of democracy and gender equality is very low in the Arab countries. There is a group of people in the region who support both democracy and gender equality, but they are a small group (about 17% of the population) of elderly and middle-aged people characterized by higher education and social status. A substantial number of poorly educated males express support for democracy but not for gender equality. Many people, especially young males aged 25–35 in 2007, are against both gender equality and democracy. Younger people tend to be both better educated and more conservative, those belonging to the 25–34 age group being the most patriarchal in their gender attitudes. Yet, controlling for age, education does have a positive effect on gender equality attitudes. Nevertheless, this phenomenon may reflect two simultaneous processes going on in the Middle East. On the one hand, people are getting more educated, urbanized, etc., which means the continuation of modernization. On the other hand, the fact that older people are the most liberal age group may point to a certain retrogression of social values in the younger generations.

**Keywords:** modernization; Arab Barometer; democracy; gender equality; patriarchal values; Islam

### 1. Introduction

The Muslim publics have become a popular research subject in the past decade due to international terrorism worldwide and migration issues in Western Europe. According to Samuel Huntington, the collapse of the Soviet Union led to a new clash of civilizations between the Western world on the one hand and the

---

\*Corresponding author. Email: [vvkostenko@hse.ru](mailto:vvkostenko@hse.ru)

Muslim and Eastern Orthodox civilizations on the other hand.<sup>1</sup> However, the heart of the Muslim world, the Arab civilization, is not yet well researched, and limited knowledge often results in prejudice and miscalculation. Scholars got a chance to learn more about this region in 2009 when the first wave of the Arab Barometer database was published by Mark Tessler and his colleagues.<sup>2</sup> These are high-quality data that make it possible for the first time to analyse a large-scale quantitative survey across many Arab countries. The dataset includes seven countries of the Arab world surveyed in the first wave of the project in 2006–2007. This paper analyses support for gender equality and democracy in the countries covered by the first wave of the Arab Barometer project.

We claim that augmenting questions about democracy with attitudinal questions about gender equality may result in a better estimation of liberal values in the Arab countries than only questions about democracy might provide. Therefore, we construct two indices, an index of gender equality and an index of democratic preferences. We then conduct cluster analyses with these two variables and finally examine social and demographic differences between people across the clusters.

## 2. Previous research

Gender-related topics have become an integral part of comparative research in recent years. Tessler and Warriner argue that “gender studies, which separate the socially constructed roles and orientations of women and men from biological definitions of sex, are increasingly being combined with international studies at the theoretical level”.<sup>3</sup>

As Steven Fish writes, “Precisely how the status and treatment of women and girls affects political regime must be the subject of a great deal more research before firm conclusions may be drawn”.<sup>4</sup> However, we may draw some preliminary conclusions from the extant works in this field. For example, Christian Welzel in his recent book *Freedom Rising* shows that attitudes to female reproductive freedoms (such as abortion, divorce and pre-marital sex) have the strongest predictive power in explaining democracy worldwide.<sup>5</sup> An explanation of this link may be drawn from a statement of Martin Luther King, who said that to hold a man down, one needed to stay down with him. He meant that not only did suppression close opportunities for the oppressed one, but it also raised barriers to free exchange of ideas, development, and openness to change for the oppressor. This mechanism has been discussed in some studies of racism, but it can likewise be applied to gender inequality.<sup>6</sup>

As Alexander and Welzel argue, women’s empowerment is inherently emancipative and a belief-mediated process.<sup>7</sup> Consequently, those people who support women’s empowerment (as measured by support of gender equality questions) are more likely to support liberal democracy and to be included into the broader process of human empowerment – an important component of the knowledge society.

Liberalization of gender attitudes and its consequences are described by Ronald Inglehart and Pippa Norris in their book *Rising Tide*.<sup>8</sup> The mechanism of

the “rising tide of gender equality” consists of two phases: first, industrialization brings women into the labour market, which reduces fertility and raises educational level. At the second phase (in postindustrial society), women get access to professional and managerial positions and gain political influence. Inglehart and Norris use the World Values Survey (WVS) data to demonstrate that, on the societal level, richer, politically stable, and technologically advanced societies are becoming more supportive of gender equality due to generational replacement. On an individual level, it is younger, less religious, better educated people, especially women, who tend to support equality in all possible domains, including female rights. They find that attitudes towards gender equality are strong predictors of democratic aspirations all around the world. Equally important for our argument, Norris and Inglehart also show that gender equality support is systematically rising all over the world except in the regions with Islamic cultural legacy.

### **2.1. Gender inequality in the Muslim world**

The issue of Muslim women’s rights has been discussed for years, but women still lack adequate representation in the social and political sphere.<sup>9</sup> This problem is very controversial and is widely discussed by feminist and human rights organizations in the Arab region.<sup>10</sup>

The Western media and publics stereotype Arab Muslim women as “poor and oppressed”. However, some authors, including such established authorities as Valentine Moghadam and Mounira Charrad, argue that “Muslim women are no longer nameless, faceless or voiceless, and that they are ready to stand up and be counted”.<sup>11</sup> Some scholars say that the post-colonial approach to Muslim women should be challenged and their problems have to be studied in the comparative perspective in line with worldwide gender disparities.<sup>12</sup>

One of the most typical explanations of extraordinarily high levels of female subordination in Muslim countries is that this position of women is prescribed in the Quran. Some scholars find that influential Muslim clerics disagree on whether the Western concept of women’s rights is in fact against the teachings of Shari’a.<sup>13</sup> Ann Elizabeth Mayer finds that the most authoritarian of the Muslim countries are “Islamizing” their states and societies by using Islam as an ideological justification for their repressive policies, going as far as to say that their repression protects the state from “the tampering of Satan”.<sup>14</sup> Other scholars argue the turn to Islam may be instrumental in those Muslim countries that are going through nation building and power consolidation. Such countries’ ruling elites conveniently find roots for their new national identities in Islam.<sup>15</sup> Chaturvedi and Montoya posit that Muslim countries are unique in this regard due to religious pressures that often conflict with the conventional concept of human rights. Using data from the Cingranelli-Richards Human Rights Dataset, they find that the Muslim countries that restrict the influence of fundamentalist religion in the government and society have managed to improve women’s economic and social rights.<sup>16</sup>

A prevailing scholarly opinion on the Arab world is that “there is a deficit both of democracy and of freedom in Muslim-majority countries”.<sup>17</sup> Meanwhile, scholars report a great demand for democracy among Arab publics.<sup>18</sup> Thus, 57% of respondents in the Muslim-majority countries, and only 45% of respondents in other countries, answer that democracy is “very good” and “73% of people in Muslim-majority countries, as compared with 64% in non-Muslim-majority countries, disagree with the claim that democracy is bad for the economy”.<sup>19</sup>

Mark Tessler has published a few works discussing attitudes towards democracy in the Arab world.<sup>20</sup> He pointed out that about 80% of the region’s population supported democracy, and his observation was soon backed up by the “Arab spring” events when mass protests against the old authoritarian regimes shook many Arab countries.<sup>21</sup> Despite the expectations that a bottom-up democratic transition would take place,<sup>22</sup> most of those revolutions ended up with the rise of Islamist parties, and the current regimes in those societies are far from the Western ideal of democracy. Some scholars argue that it could have been predicted by the values and attitudes of the mass publics in those societies, as there is no wide support for equity in any sense in many of them. In spite of the ostensible preference for democracy among Muslim publics, only one-quarter of all the countries with an Islamic majority enjoy electoral democracy, and until recently none of these have been Arab countries.<sup>23</sup> According to the data available in 2003, only 55% of people in Muslim majority countries included in the WVS support gender equality, compared to 82% of the people in the Western countries.<sup>24</sup>

As many authors working in the framework of modernization theory have shown, GDP per capita and human development are intrinsically linked to egalitarian attitudes.<sup>25</sup> In wealthier societies (for example, in Scandinavia) people are less restrictive and discriminatory towards minorities and other vulnerable groups. Nevertheless, economic wealth does not always correlate well with gender equality, and oil-rich Muslim countries, especially those inhabited by predominantly Arab populations, are the best example for this discrepancy.

Not only does Muslim culture affect gender inequality,<sup>26</sup> but there may be some economic reasons for the subaltern position of women in Muslim, and particularly Arab, societies.<sup>27</sup> As Michael Ross argues, the influence of Islam per se as a source of patriarchal norms is often overestimated.<sup>28</sup> According to his study, it is the “oil curse” that ruins opportunities in the labour market and political representation for women in the Arab countries. On the other hand, there are some counterarguments against the oil curse discourse. Pauline Jones Luong and Erika Weintal posit that the key issue of the so-called curse has to do with weak institutions that had not yet fully developed when the windfall of petroleum money began.<sup>29</sup> They find some examples of oil-rich Muslim countries, where mineral trade has led to better societal outcome.

Some theoretical support for Muslim intransigence on gender egalitarianism can be found in Samuel Huntington’s work.<sup>30</sup> Huntington believes that Muslim societies prefer strong leaders and are unlikely to develop Western-type democracies. He finds a major reason for this in the traditional collectivism of the Muslim

culture as opposed to the individualism of the Western civilization where it has led to the development of human rights, including gender equality, proprietary rights, and liberal democracy. He also argues that “Islam’s borders are bloody, and so are its innards” meaning that Muslims are more prone to political violence and endanger international peace.

These views have been heavily criticized recently. For example, Steven Fish shows that Huntington did not control for any other predictors, and in fact the level of political violence in Islamic societies does not differ significantly from the rest of the world controlling for GDP. He also finds no evidence that “religious and secular authority are joined in Islamic societies” or for an explicit support for authoritarianism. Some other characteristics, such as the gap between the rich and the poor, are smaller in that part of the world than in the others. However, there is one feature among Islamic publics that explains a large part of the democracy variance – this is female subordination. Fish finds large gaps between female and male literacy in the region, imbalanced sex ratio and segregation at school, work, and leisure places. In his multivariate analysis he shows that gender disparity and oil-based economy are the major explanatory factors explaining the lack of democracy in the Middle East.<sup>31</sup>

Ronald Inglehart, based on the WVS data, finds that Muslims have very strong aspirations to live under in democratic regimes.<sup>32</sup> However, he also finds that the populations of Muslim societies are still rather conservative with respect to human rights, gender attitudes, and tolerance towards minorities (for example, homosexuals). Controlling for other variables, Islam remains a stable predictor of patriarchal values.

As Inglehart and Norris argue, “a society’s commitment to gender equality and sexual liberalization . . . is the most reliable indicator of how strongly this society supports principles of tolerance and egalitarianism. Thus, the people of the Muslim world overwhelmingly want democracy, but democracy cannot be sustainable in their societies”.<sup>33</sup> Another important contribution to the field is the work of Mary Ann Tetreault and her coauthors on Kuwait. As they argue based on a series of in-depth interviews, “although outsiders think of Kuwait as rich, Kuwaitis perceive their nation as small and poor, with today’s wealth an accident contingent on forces external to state and society and therefore fundamentally insecure”.<sup>34</sup> They further write that “Kuwait’s deeply embedded culture of poverty co-evolved with the patriarchal tribalism characteristic of its social order”.<sup>35</sup> This interesting finding can explain why even the rich societies that draw their wealth from the oil rent lag behind much poorer states in other parts of the world in terms of female rights.

## **2.2. Democracy support and gender inequality in Islamic countries**

Many comparative social scientists and feminist theorists argue that there is strong and pervasive gender inequality in the Middle East.<sup>36</sup> Whereas some of these countries might be considered as “liberalized autocracies because of the power

vested in the monarchs or presidents” or as non-liberal democracies such as Iran “with its regular but controlled elections and restricted citizen rights”,<sup>37</sup> empirical research shows that women in the Middle East and North Africa desire to overcome their second-class citizenship.<sup>38</sup> Feminist movements in some cases (Morocco, Tunisia, Algeria) have managed to expand women’s rights.<sup>39</sup>

A new wave of protests known as the “Arab spring” erupted in 2010 and toppled the government in some countries. However, the newly elected governments sometimes proved to be even more conservative and pro-Islamic than the old ones.<sup>40</sup> One of the reasons behind this may be the traditionalist value structure reflected, in particular, in gender attitudes.<sup>41</sup> Nadie Al-Ali believes that women and gender are “key to both revolutionary and counter-revolutionary processes and developments and not marginal to them”.<sup>42</sup>

Ciftci studied determinants of individual democracy support in 10 Muslim-majority countries, both Arab and non-Arab, using the fourth wave of WVS. He employs modernization theory and tests two alternative explanations: social capital and Islamic values. Using OLS regressions, he found that gender equality attitudes correlate with pro-democracy attitudes and with political trust. However, according to Ciftci, religiosity and Islamic values are poor predictors of attitudes towards democracy. He ran a simultaneous test of multiple theories within a diverse sample of Muslim countries. Gender equality attitudes had the strongest effect on democracy support. Religiosity has no significant effect in eight out of 10 states.<sup>43</sup>

### 3. Modernization theory and hypotheses

The revised theory of modernization derives from the classic theory of modernization rooted in the works of the founding fathers of sociology. Some scholars trace it back to Herbert Spencer who developed the ideas of social Darwinism, or to Karl Marx who showed how economic conditions changed social structure in a predictable way. Max Weber considered religious inheritance a strong factor in economic development. However, the theory of modernization as such was formulated by Talcott Parsons in sociology and by Seymour Martin Lipset in political science in the 1950s and early 1960s. Lipset hypothesized that economic development, liberal values, attitudes towards democracy, human rights, and religious practices form a unified factor of social development. He also insisted that certain discrepancies that were found when studying some isolated cases of political regimes could be better explained by cross-cultural comparative analysis. Two major offshoots developed from Lipset’s approach: the first one studies stability of democratic institutions (Rostow, Olson, Huntington, O’Donnell, Dahl, Przeworski). The second focuses on analysing values in comparative perspective (Inkeles, Schwarz, Florida, Hofstede, Inglehart, Welzel). Our theoretical approach draws mostly on the modernization theory revised by Inglehart and Welzel.<sup>44</sup> They use a two-dimensional space to position every society on their “cultural map”. The first dimension is called “survival – self-expression values”. Those societies where survival is not guaranteed because risks of starvation, poverty, and violent death remain high tend to constrain personal



independence for the sake of group security. These communities are very intolerant to alternative opinions and lifestyles, any of which (from homosexuality to religious diversity) are perceived as a threat. People in these societies demonstrate low levels of out-group trust and higher in-group trust; gender roles are traditionally fixed and stable. Politically those states are authoritarian as their citizens are ready to pay for social security, order and control with their freedoms.

On the contrary, tolerance, human rights, out-group trust, and interest for ethnic and religious diversity grow in those societies where self-expression values dominate. People become less religious, traditional family ties get weaker, and women enjoy more rights and gender equality. These states eventually become democratic. Before such transition becomes possible, it is essential that most people in those societies have never experienced starvation or real danger. Inglehart and Welzel believe that all societies will eventually advance towards self-expression due to economic growth and generational replacement.

The other dimension is traditional vs. secular-rational values. Societies with traditional values that emphasize family and religiosity demonstrate higher national pride, more respect for authorities, stronger nationalist sentiment, greater support of protectionism in economy, and lower levels of political activism. People in such societies are explicitly negative about abortion, divorce, suicide, and euthanasia. The ideal of a large extended family with traditionally distributed gender roles is proclaimed and supported.

The majority of post-industrial and many industrial societies belong to the secular-rational type, where personal aspirations are considered more important than traditional norms or religious behests. In particular, attitudes to contraception, abortion, divorce, and prostitution liberalize. Family plays lesser role, fertility declines, and the society becomes more atomized. Women get more freedom both in private and in public life. People become more critical of authorities, powers that be face severe criticism, public scrutiny of their decisions, and various forms of political activism.

The theory of modernization may seem to only describe macro-level. However, as George Ritzer and Jeffrey Alexander have brought to notice, there is a macro-micro continuum.<sup>45</sup> Alexander believes that this continuum has to do with social order at different levels. At the macro-level, this order is brought from the outside and is collectivist by its nature. At the micro-level, this order comes from the internalized norms and individual agreements.

As the authors of the human development approach argue, all the macro-processes are reflected in everyday individual practices, attitudes and beliefs.<sup>46</sup> For example, a macro-trend of declining fertility in industrialized societies can be seen in the changes in everyday lives of the families when they move to the cities. As new opportunities open to women, they get a better education, make money, and postpone the first birth. These changes undermine the traditional gender pattern of male breadwinner and female housewife as the woman's new role changes her and her partner's values. Their children take more egalitarian attitudes as a norm, and if it happens in many families, we register this at the macro-level in mass surveys.

The core explanatory idea of value change in the revised modernization theory is that the new generations living in more secure conditions are more likely to support self-expression values in all spheres of life.<sup>47</sup> However, the populations of agrarian societies do not show such dramatic value shifts as do post-industrial and industrial countries. Our first hypothesis (H1) therefore is that younger people in the Arab countries are more egalitarian gender-wise than are older people, even though this difference may not be as large as in more affluent societies.

According to the revised theory of modernization, egalitarian gender attitudes (as well as other values characteristic of human empowerment) are predicted not only by age and gender, but also by higher levels of educational attainment. This leads to our second hypothesis (H2) that higher education is likely to be associated with greater support for gender equality, whereas those people who received only limited formal education are more traditional in their values. Men in agrarian societies, according to numerous findings from both quantitative research and feminist literature,<sup>48</sup> are more likely to support status quo, whereas women (especially young and having university education) are more likely to have higher levels of support for gender equality. For this reason, we expect significant interactions of education and age with gender (H2a).

As we have mentioned above, many studies find Islam to be an obstacle for gender egalitarianism. We cannot test this idea in our study because the prevailing majority of respondents are Muslims and thus there is little variance on religion in the sample. However, we can control for the level of religiosity as it is associated with more conservative, traditionalist views in many countries of the world.<sup>49</sup> Thus, our third hypothesis (H3) is that more religious people will express lower support for gender egalitarianism.<sup>50</sup>

Our final hypothesis (H4) is that we expect higher levels of gender egalitarianism to coincide with greater preference for democracy because the latter is generally associated with post-materialism and liberalism.<sup>51</sup> Although both gender equality and democracy in the Arab world have received quite a lot of attention in the academic literature in the recent years, these two issues have been usually analysed separately.

#### 4. Data and variable measurement

Previous research on gender equality and democracy in the Arab world is limited by scarcity of cross-cultural quantitative data in the region; such data have appeared only recently and now open new opportunities for cross-national comparative research.<sup>52</sup>

The Arab Barometer project published the data we use here in 2009.<sup>53</sup> They were collected in Morocco, Algeria, Kuwait, Palestine (West Bank and Gaza Strip), Lebanon, and Yemen between spring 2006 and autumn 2007. The dataset consists of 181 variables and 8122 individual records. The mode of data collection was face-to-face interviews. Different sampling procedures (such as area

probability sampling with quotas or three-stage cluster sampling, etc.) were used to obtain a representative sample in each country.

Gender equality index is constructed of seven variables.<sup>54</sup> This index is intended to measure respondents' attitudes towards gender equality in both public and private spheres. We had some concern regarding the number of latent factors that might underlie the seven variables. Exploratory factor analysis makes it possible to extract two factors that can be theoretically interpreted as "gender equality in public sphere" and "gender equality in private sphere". However, other methods show that there is only one important latent factor. There is a simple theoretical argument to use all the seven variables in one general index: the true gender equality cannot be achieved even if women's rights are only limited in one particular area but not the other. Thus, we use a simple composite index involving all available variables.

Although the original variables are scaled from 1 to 4, our index is re-coded into a scale ranging from 0 to 1 (0 – very conservative, 1 – very liberal). Likewise, we construct an index of democracy support based on four items scaled from 1 to 4 each, see [Appendix 1](#) for details.

The data originally contained 8122 individual observations. However, listwise deletion of missing variables loses 2014 cases (24% of the data). Therefore, we imputed missing values using a multiple imputation procedure implemented in the *Amelia II* package in the R environment.<sup>55</sup>

We find having a measure of religiosity essential for our analysis because religiosity is strongly associated with conservative values and gender attitudes in particular.<sup>56</sup> Whereas there are several measures of religiosity in the dataset, the answers to the question "How often do you read the Quran?" is closest to a normally distributed variable. The other two questions, namely "Do you pray?" and "Would you describe yourself as a religious person?" yield highly skewed responses and result in a very low variance. We find that reading the Quran, the main book of Islam, is a good indicator of practicing religion.<sup>57</sup> We recode this variable from the five original categories into three, which are "daily" (equivalent to "every day or almost every day" in the original data), "sometimes" (combining the original "several times a week" and "sometimes") or "rarely/never" (from the two distinct categories in the original coding). This recoding procedure got rid of scarce categories and improved the distribution of this variable.

We also modified age categories of the original dataset. The last (seventh) category of age, 75 and older, has too few cases in the sample, therefore we united it with the "65–74" age group, which resulted in a new age variable with six categories, the last one being "65+."<sup>58</sup>

## 5. Insights from country-level and individual variation of gender equality support in the Middle East

First, we calculate some descriptive statistics and find substantial cross-country variation in gender equality support in the Middle East. Furthermore, we find

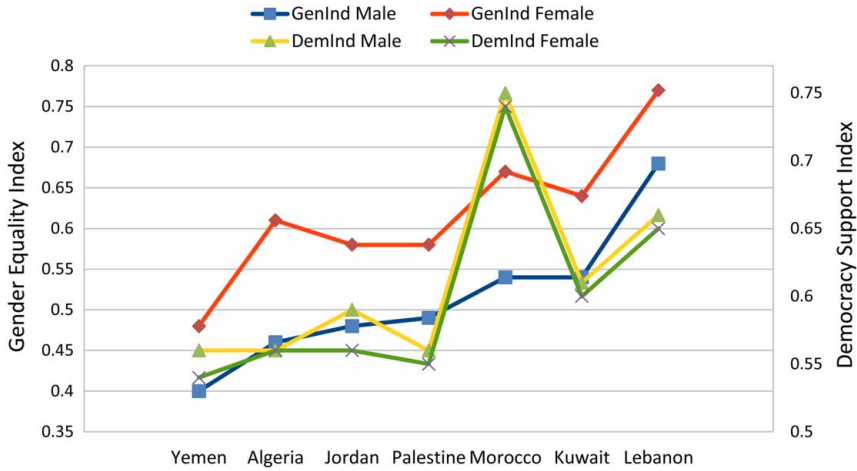


Figure 1. Means for gender and democracy indices.

Notes: GenInd stands for Gender Equality Index constructed of 7 items, DemInd stands for Democracy Support Index constructed of 4 items (see [Appendix 1](#) for details).

significant and large gender gaps in all the countries included in the analysis, which is especially strong in the societies with moderate levels of gender equality support.

As [Figure 1](#) shows, Lebanon's population is the most liberal, whereas the population of Yemen is the most conservative with respect to gender equality. Democracy support does not differ much from this distribution. Yemen, Algeria, Jordan and Palestine show patterns similar to each other (with the mean of 0.55 to 0.58 on a scale from 0 to 1), while Kuwait (0.61), Lebanon (0.66) and especially Morocco (0.74) are more supportive of democracy. While Lebanon has the highest score in gender equality index, it comes second after Morocco on democracy support.

Considering individual-level variation, we investigate the effects of gender, age, education, and religiosity on gender equality attitudes. We observe an unexpected effect of age on gender equality attitudes: gender equality support is weaker among younger males, especially those of 25–34 years of age, compared to the older cohorts. This effect is not very large (about 3% lower among young people than among older people and 10% lower for young males compared to older males), but quite significant. The logic of modernization suggests that younger people should be more liberal than the older people, but this is not the case in the Arab Barometer data. Surprisingly, females' attitudes towards gender equality are around the same level across all age groups ([Figure 2](#)).

The effect of age on democracy support is similar: older generations are more pro-democratic. The age category of 25–34 is, again, the most conservative and education has the least effect on this particular age group. On the contrary,

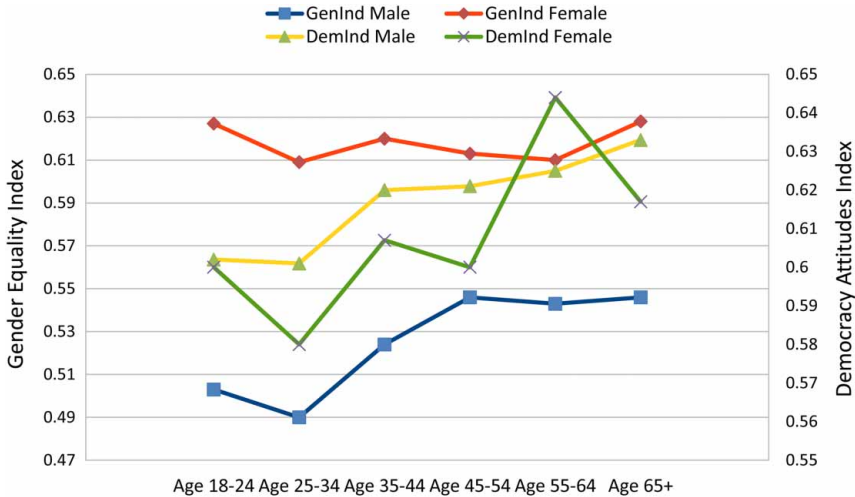


Figure 2. Means for gender and democracy indices.

Notes: GenInd stands for Gender Equality Index constructed of 7 items, DemInd stands for Democracy Support Index constructed of 4 items (see [Appendix 1](#) for details).

education has a stronger positive effect on gender equality index in the older age groups, especially in the group of people aged 65 or older.

## 6. Testing the effects of education and religiosity

For a more rigorous test of the trends observed in descriptive statistics, we regress gender equality index on gender, education, religiosity, and country. As there are not enough cases for multilevel modelling, we use dummy variables for each country taking Yemen (the most conservative society) as a baseline category. Three models are shown in [Table 1](#) (see [Appendix 3](#)). The first model includes only six of the seven countries because the date of the Kuwait sample is very poor in quality; later versions of the published data omit the country altogether.<sup>59</sup>

However, the shortcomings of the Kuwait sample had to do with problems other than gender issues. Therefore, we keep these data for further analysis, although we check the validity of the sample for our purposes by comparing a model without the Kuwait sample (Model 1) with the same model including Kuwait (Model 2). Model 1 and Model 2 are practically identical, which justifies the use of the Kuwait sample in further analysis with this limited set of variables. Model 3 shows a regression on full data with clustered standard errors because the distribution of errors may depend on country. The regression coefficients across Models 2 and 3 do not differ much and confirm the basic findings of descriptive statistics. Females, predictably, are more likely to support gender equality. The effect of education is quite straightforward; more educated people are more

Table 1. OLS regressions on gender equality index with and without Kuwait sample and with robust standard errors.

| <i>Dependent variable:</i> |                       |                     |                                       |
|----------------------------|-----------------------|---------------------|---------------------------------------|
| Gender Equality Index      |                       |                     |                                       |
|                            | Without Kuwait<br>(1) | With Kuwait<br>(2)  | With Robust<br>Standard Errors<br>(3) |
| gender ( <i>female</i> )   | 0.118*** (0.004)      | 0.115*** (0.004)    | 0.115*** (0.004)                      |
| Age 18–24                  | <i>baseline</i>       | <i>baseline</i>     | <i>baseline</i>                       |
| Age 25–34                  | –0.005 (0.006)        | –0.008 (0.006)      | –0.008 (0.005)                        |
| Age 35–44                  | 0.015** (0.006)       | 0.010* (0.006)      | 0.010* (0.006)                        |
| Age 45–54                  | 0.023*** (0.007)      | 0.015** (0.007)     | 0.015** (0.007)                       |
| Age 55–64                  | 0.035*** (0.010)      | 0.032*** (0.009)    | 0.032*** (0.010)                      |
| Age 65 +                   | 0.048*** (0.011)      | 0.038*** (0.011)    | 0.038*** (0.011)                      |
| Illiterate                 | <i>baseline</i>       | <i>baseline</i>     | <i>baseline</i>                       |
| Primary                    | 0.054*** (0.008)      | 0.050*** (0.007)    | 0.050*** (0.008)                      |
| Secondary                  | 0.086*** (0.009)      | 0.077*** (0.008)    | 0.077*** (0.009)                      |
| 2-year college             | 0.113*** (0.010)      | 0.100*** (0.009)    | 0.100*** (0.010)                      |
| Bachelor                   | 0.129*** (0.009)      | 0.119*** (0.009)    | 0.119*** (0.009)                      |
| Master or higher           | 0.150*** (0.013)      | 0.143*** (0.013)    | 0.143*** (0.014)                      |
| Jordan                     | 0.091*** (0.007)      | 0.091*** (0.007)    | 0.091*** (0.007)                      |
| Palestine                  | 0.102*** (0.007)      | 0.102*** (0.007)    | 0.102*** (0.007)                      |
| Algeria                    | 0.075*** (0.007)      | 0.075*** (0.007)    | 0.075*** (0.008)                      |
| Morocco                    | 0.180*** (0.008)      | 0.177*** (0.008)    | 0.177*** (0.008)                      |
| Kuwait                     |                       | 0.162*** (0.008)    | 0.162*** (0.009)                      |
| Lebanon                    | 0.265*** (0.008)      | 0.266*** (0.008)    | 0.266*** (0.008)                      |
| Yemen                      | <i>baseline</i>       | <i>baseline</i>     | <i>baseline</i>                       |
| Quran (Sometimes)          | 0.017*** (0.005)      | 0.020*** (0.005)    | 0.020*** (0.005)                      |
| Quran (Rare&Dont)          | 0.048*** (0.006)      | 0.046*** (0.005)    | 0.046*** (0.006)                      |
| Quran (Often)              | <i>baseline</i>       | <i>baseline</i>     | <i>baseline</i>                       |
| Constant                   | 0.162*** (0.012)      | 0.176*** (0.012)    | 0.176*** (0.012)                      |
| Observations               | 7,372                 | 8,122               | 8,122                                 |
| $R^2$                      | 0.270                 | 0.256               | 0.256                                 |
| Adjusted $R^2$             | 0.268                 | 0.254               | 0.254                                 |
| Residual Std. Error        | 0.175                 | 0.175               | 0.175                                 |
|                            | ( $df = 7353$ )       | ( $df = 8102$ )     | ( $df = 8102$ )                       |
| $F$ Statistic              | 150.743***            | 146.529***          | 146.529***                            |
|                            | ( $df = 18; 7353$ )   | ( $df = 19; 8102$ ) | ( $df = 19; 8102$ )                   |

\* $p < 0.1$ .\*\* $p < 0.05$ .\*\*\* $p < 0.01$ .

likely to support gender equality. The population of Lebanon is the most supportive of gender equality. However, compared to the results shown in Figure 1, Kuwait and Morocco swap places, so that Kuwait becomes the second most liberal country. Other countries keep the order shown on Figure 1.

We also include standard controls for income, generalized trust, trust to the prime minister, and political interest. Income shows a small positive effect on gender equality attitudes; generalized trust shows no significance in the model, neither does trust in the prime minister. Those very interested in politics report slightly more egalitarian gender attitudes than the others (Table A3.1 in [Appendix 3](#)).

As we worked with imputed data using the Zelig package in the R environment,<sup>60</sup> we present the results of the full model based on ten imputed datasets. The estimator here is maximum likelihood and thus it is impossible to estimate  $R^2$ . To get an idea of the amount of variance explained, we provide an  $R^2$  coefficient for the first of the imputed dataset, which equals 0.27. Summary statistics on the variables included in the analysis before and after the imputation are shown in Table A2.1 in [Appendix 2](#).

Our regression analysis confirms that older generations are more inclined to support gender equality, which is contrary to what the theory of modernization would predict. The 25–34 age group is still the least supportive of gender equality, whereas the oldest (65+) generation, taken as the baseline in the regression, is the most supportive. We find that reading the Quran is associated with weaker support of gender equality.

### **6.1. *How does democracy support relate to gender egalitarianism among Muslim publics?***

In order to classify respondents by their preferences for gender equality and democracy, we use k-means cluster analysis.<sup>61</sup> Essentially, we obtain a two-dimensional space where we identify five clusters of approximately equal size as shown on [Figure 3](#). Cluster C represents those respondents who have no strong preference on either dimension. People in other clusters have a strong preference either way on at least one dimension. People in clusters D and B either support democracy but not gender equality or the other way around. The existence of a large group of people (over 30% of the sample) with such inconsistent attitudes is interesting and may explain some of the findings shown in the previous section. We discuss this in Section 7.

### **6.2. *Who are the people who support both democracy and gender egalitarianism in the Arab world?***

To further elucidate the distribution of respondents as shown on [Figure 3](#), we use negative binomial regressions and estimate the effects of some factors that make it more or less likely for people to belong to a particular cluster. We think of cluster membership as a response variable of interest and other categorical variables as predictors. As all variables are categorical, we end up with multi-dimensional contingency tables. One could apply the standard log-linear model to analyse such tables.<sup>62</sup> In this case, however, the negative binomial model is preferable to the standard log-linear model because of over-dispersion.<sup>63</sup>



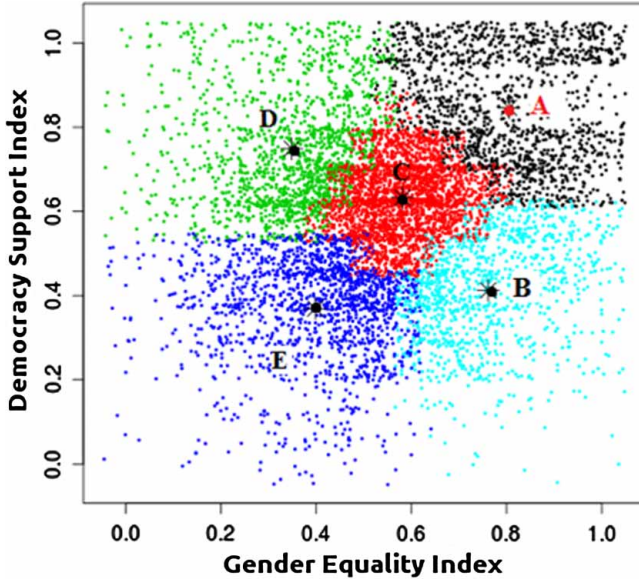


Figure 3. Distribution of cluster centres for cluster analysis of 2 indices (gender equality and democracy support).

Treating cluster membership as a variable on par with observed variables in this type of modelling is, perhaps, a novelty. However, by no means does it violate the assumptions of the negative binomial model.

First, we tabulate cluster by gender, age and education. We have 5 clusters by 2 genders by 6 age groups by 6 education levels, resulting in 360 combinations. In other words, we assign 8122 cases to 360 cells of a four-way contingency table. We do not include country as a factor in this table because it would have created too many empty cells. Instead, we make another two-way table for cluster by country.

Next, we apply the negative binomial model to these two tables. In the first table, we take the number of people in each cell as the response variable with age group, level of education, gender, and cluster as factors. We start with the saturated model and then arrive at a better model via a step-wise procedure. The regression results of the first regression model, for the four-way table, are presented in Table A3.2 in [Appendix 3](#). Of particular interest to us are the interactions between demographic variables and the clusters. Significant positive coefficients of the interaction effects mean that there are significantly more people belonging to the denoted demographic group in the cluster. Negative significant coefficient means that there are fewer of such people in the cluster. Similar results on distribution of clusters by country are presented in Table A3.3 in [Appendix 3](#).

Cluster A ( $N = 1384$ ) in the upper right corner of the [Figure 3](#) is the most “progressive”. These people support both gender equality and democracy. The



cluster is predominantly female and not so young, the best represented age group being older than 45 with relatively few people aged 25–34. These people are more likely to have received the highest level of education, that is Master of Arts or higher. Significantly more people with such attitudes live in Lebanon and Morocco.

People belonging to Cluster B ( $N = 1084$ ) in the lower right corner of the [Figure 3](#) have high support for gender equality and low support for democracy. This is also a predominantly female group. Educational attainment of these people, however, is not so high as in Cluster A. Age is non-significant for this cluster, which means that people of all age groups have approximately equal chances to belong here. This cluster is well represented in Jordan, whereas people from Morocco, Lebanon and Yemen are less likely to belong here.

Cluster C ( $N = 2615$ ) at the centre of the graph is filled with people who are not sure about their perceptions on either dimension. Males aged 25–35 are particularly likely to belong to this cluster. Educational and country characteristics of this cluster are similar to Cluster B as few of these people have higher education; many respondents come from Jordan and few from Morocco, Lebanon or Yemen.

The upper left Cluster D ( $N = 1468$ ) unites people who are supportive of democracy, but not of gender egalitarianism. This case is the most unexpected from the perspective of the theory of modernization. There are many young males here (18–34 years old), and very few of these people are from the age group of 45–65 years. Education of this group is the lowest of all clusters, many of these people being illiterate. They are distributed evenly between Yemen and Kuwait with very few people coming from Lebanon, Morocco, Palestine or Algeria.

Cluster E ( $N = 1468$ ) in the lower left corner of [Figure 3](#) can be named “the least progressive” as these people support neither gender equality, nor democracy. Young males aged 18–34 are most likely to be here, with few people older than 55. Their education is not very high, but better than of those in Cluster D; these people typically have completed high school or a two-year college, yet there are very few people with an Master’s degree here. Morocco, Kuwait, and especially Lebanon have few representatives in this cluster.

It is also possible to categorize countries by their distribution between different clusters. Two countries show similar patterns, namely Morocco and Lebanon, with a heavy presence in the upper-right corner of [Figure 3](#); that is the “progressive” cluster A. Morocco is represented in the upper-left, middle and bottom-right clusters. Most of the Lebanese are in the centre and bottom-right clusters. Population of Kuwait is similar to Lebanon but the coefficients are smaller, which means that the odds of finding a Kuwaiti in those clusters are somewhat smaller than for a Lebanese.

The other two countries, Palestine and Yemen, are very similar to each other and opposite to Lebanon and Morocco, that is they are particularly numerous in the bottom left, “the least progressive”, cluster. Palestine is also well-represented in the central cluster and Yemen in the upper-left cluster. Finally, Algeria shows

an interesting pattern: it is represented equally in the bottom-left and the upper-right clusters, showing an interesting case of possible polarization in that society.

## 7. Discussion

Although democracy and human rights are very popular topics in Islamic studies,<sup>64</sup> the relationship between the two in the Arab world is still an unsolved puzzle. None of the Arab countries enjoys electoral democracy whereas studies of the Arab publics have shown that there is a very high popular support of democracy. This paradox may be related to a particular understanding of democracy in the Arab countries.

The age effect (H1) is completely counter-intuitive, possibly making this region an outlier for the revised theory of modernization proposed by Inglehart and Welzel. The older people in the Arab world are more likely to support gender equality, whereas people aged 25 to 35 in 2007 (when the data were collected) are the most conservative. The analysis of the WVS data conducted by numerous scholars shows the opposite trend in other parts of the world. This puzzle needs to be further explored in more detail, but we can suggest several explanations based on both theoretical and historical assumptions.

A possible explanation of this phenomenon has to do with the region's recent history. The formative period of the older people in the Middle East dates back to 1950–1960s, which was the peak time of anti-colonial movement. The leaders of the movement were predominantly secular, their ideology of pan-Arabism and nationalism being more salient than the Muslim identity. Some of those movements got ideological, financial and political support from the Soviet Union which had made gender equality an essential part of its ideology.<sup>65</sup> These ideas could have been internalized by those people who were aged 15–25 at that time. As the theory of formative period predicts, the attitudes and social norms inculcated in this age may be quite stable throughout the life cycle.<sup>66</sup>

Speaking of the most conservative generation, those who were 25–34 years old in 2007, we hypothesize that there could be at least two historical reasons that led to conservation of their values and gender attitudes at rather low levels. One of them is the collapse of the Soviet Union and its sphere of influence that led to a certain retrogression of social values in some countries of the Middle East, in particular Yemen.<sup>67</sup> Simultaneously, the international prestige of the US and its conservative allies in the Middle East had risen dramatically. Proliferation of conservative ideologies sponsored by the Persian Gulf monarchies continued at higher rate via schools, TV channels and other media. However, we cannot rule out that this might occur because of a certain age effect. To find out for sure, we need to wait until time-series data become available.

Female respondents in all the societies included in the survey, articulated higher demand for more egalitarian roles both in public and in private life. On the other hand, women and men show similar levels of democracy support in every country of the Arab world.

The effect of education on gender equality issues is very predictable, but fairly non-trivial with respect to attitudes towards democracy. Those respondents who only got high-school level education or less tend to exhibit the most conservative gender attitudes. University graduates tend to have egalitarian perceptions of female roles both at home and in the public domain. This relation is stable, positive, and linear (H2). The situation is quite different with respect to support of democracy. Both most and least educated people tend to support the idea of democracy, whereas those who completed a high school or 2-year college do not tend to value democracy; this effect is true for all age cohorts of the Arab world populations.<sup>68</sup> However, we have not found significant interactions of education and age with gender (H2a).

Religiosity (H3) in our analysis is measured as the frequency of reading the Quran. More religious people (those who read the Quran more often) are found to be less gender egalitarian. This finding is fully in line with the theoretical framework of our study, as higher levels of religiosity are associated with conservative attitudes in all domains.

Democracy support (H4) in the Arab societies is associated with gender egalitarianism at a rather low level (the correlation coefficient is 0.19). Moreover, whereas in some countries the correlation is positive, it is negative in others. Cluster analysis and negative binomial modelling show that there are many people, over 30% of the sample, who support democracy and oppose gender equality or vice versa. This may lead to a tentative conclusion that the perception of the term “democracy” in the Arab world might differ from that in the West. If equal rights are not considered to be a part of the democratic system, we should be very suspicious about the claim that the majority of the Arab population strives for democracy. We argue that the 80% of democracy supporters found by some researchers of public opinion in the Middle East turn in fact into about only 17% of those who understand, value, and support democracy as in the Western world. Such people (belonging to Cluster A in Figure 3) are particularly numerous in Lebanon and Morocco, middle-aged (45+) women with higher levels of education (MA+) being especially well-represented here.

Other people, the overwhelming majority of the population, are either simply very conservative and happy or, if they demand some changes, may call their ideal target “democracy”, even though it may have very little to do with a real democracy. This is probably why the Arab spring revolutions did not lead to a real democratic transition in any relevant country. As emancipative values are shared by only a small minority, we cannot expect a shift towards liberal democracy in the Arab world in the near future.

## 8. Conclusion

In this article we have explored gender egalitarianism among the populations of seven Arab countries using preferences for democracy and degree of religiosity as predictors and controlling for age, gender, and education. Some of the effects are quite predictable, and hypotheses about the emancipating effects of education

and patriarchal influence of religiosity are supported by the data. However, our hypotheses about younger people's liberal attitudes and correlation of gender egalitarianism with support for democracy did not work.

When we first started to explore the dataset, we found that the more educated people in the Arab world are more conservative in their gender attitudes. This counter-intuitive result has to do with age effects: younger people tend to be both better educated and more conservative. Controlling for age, education still has a positive effect on gender equality attitudes. Nevertheless, this striking phenomenon probably means that there are two simultaneous processes going on in the Middle East. On the one hand, people are getting more educated, urbanized, etc., which means the continuation of modernization. On the other hand, we observe a certain retrogression of social values, which is unexpected from the perspective of the theory of modernization. Younger people, especially belonging to the 25–34 age group, tend to be the most patriarchal in their gender attitudes. This finding does not necessarily negate the modernization theory but rather points to an interesting aberration which we explain with that region's recent history.

### Acknowledgements

We are grateful to Democratization anonymous reviewers for their helpful feedback on early versions of this text.

### Funding

This research was funded by LCSR Russian Government Grant [No.11.G34.31.0024] from 28 November 2010.

### Notes

1. Huntington, *Clash of Civilizations*.
2. [www.arabbarometer.org](http://www.arabbarometer.org)
3. Tessler and Warriner, "Gender, Feminism, and Attitudes toward International Conflict," 250.
4. Fish, "Islam and Authoritarianism," 29.
5. Welzel, *Freedom Rising*.
6. Wise, *White Like Me*.
7. Alexander and Welzel, "Empowering Women."
8. Inglehart and Norris, *Rising Tide*.
9. Kandiyoti, *Women, Islam, and the State*; Paxton and Kunovich, "Women's Political Representation"; Stockemer, "Women's Descriptive Representation in Developed and Developing Countries."
10. Ahmed, *Women and Gender in Islam*; Hilsdon and Rozario, "Special Issue on Islam"; Cherif, "Culture, Rights, and Norms"; Charrad, "Gender in the Middle East."
11. Hassan, "Feminist Theology," 54; Moghadam, *Modernizing Women*; Charrad, "Kinship, Islam, or Oil."
12. Golley, "Is Feminism Relevant to Arab Women?"
13. Bielefeldt, "Muslim Voices in the Human Rights Debate."
14. Mayer, *Islam and Human Rights*, 31.

15. Al-Mughni and Tetreault, "Citizenship, Gender and the Politics of Quasi States"; Baskan, "The State in the Pulpit."
16. Chaturvedi and Montoya, "Democracy, Oil, or Religion?"
17. Rowley and Smith, "Islam Democracy Paradox," 298.
18. Jamal and Tessler, "Attitudes in the Arab World."
19. *Ibid.*, 101.
20. Tessler, "Islam and Democracy in the Middle East"; Tessler and Jamal "Political Attitude Research in the Arab World."
21. Filali-Ansary, "The Languages of the Arab Revolutions."
22. Ciftci, "Modernization, Islam, or Social Capital."
23. Tessler, "Islam and Democracy in the Middle East."
24. Inglehart and Norris, *Rising Tide*.
25. Inglehart, *Modernization and Postmodernization*; Bergh, "Gender Attitudes and Modernization Processes."
26. Yeganeh and May, "Cultural Values and Gender Gap."
27. Spierings et al., "Micro- and Macro-level Determinants of Women's Employment in Six Arab Countries."
28. Ross, "Oil, Islam, and Women."
29. Luong and Weintal, *Oil is Not a Curse*.
30. Huntington, *Clash of Civilizations*.
31. Fish, "Islam and Authoritarianism."
32. Inglehart, *Islam, Gender, Culture, and Democracy*.
33. Inglehart and Norris, "The True Clash of Civilizations," 64.
34. Tetreault, *The Kuwait Petroleum Corporation and the Economics of the New World Order*.
35. Tetreault and al-Mughni, "Gender, Citizenship and Nationalism in Kuwait," 68.
36. Abu-Habib, *Gender and Disability*; Read, "The Sources of Gender Role Attitudes among Christian and Muslim Arab-American Women"; Alexander and Welzel, "Islam and Patriarchy."
37. Moghadam, *Globalization and Social Movements*, 5.
38. Abu Lughod, "Do Muslim Women Really Need Saving?"; Moghadam, *Modernizing Women*.
39. Moghadam, "The Women's Movement in the Middle East and North Africa"; Afary, "The Human Rights of Middle Eastern and Muslim Women."
40. Kuhn, "On the Role of Human Development in the Arab Spring."
41. Bellin, "Reconsidering the Robustness of Authoritarianism in the Middle East."
42. Al-Ali, "Gendering the Arab Spring," 26.
43. Ciftci, "Modernization, Islam, or Social Capital."
44. Inglehart and Welzel, *Modernization, Cultural Change, and Democracy*.
45. Ritzer, "Micro-Macro Linkage in Sociological Theory"; Alexander, *Theoretical Logic in Sociology*, 93–4.
46. Inglehart and Welzel, *Modernization, Cultural Change, and Democracy*.
47. Inglehart, *Modernization and Postmodernization*.
48. Keddie, *Women in the Middle East: Past and Present*; Mule and Barthel, "The Return to the Veil"; Moghadam, "The Women's Movement in the Middle East and North Africa."
49. Norris and Inglehart, *Sacred and Secular*.
50. Cooke, "Women, Religion, and the Postcolonial Arab World."
51. Inglehart and Welzel, "Liberalism, Post-materialism, and the Growth of Freedom."
52. See Jamal, "Reassessing Support for Islam and Democracy in the Arab World"; Rizzo, Abdel-Latif and Meyer, "The Relationship between Gender Equality and Democracy"; Blaydes and Linzer, "The Political Economy of Women's Support for

- Fundamentalist Islam”; Spierings et al., “On the Compatibility of Islam and Gender Equality.”
53. [http://www.arabbarometer.org/sites/default/files/ABI\\_datafilefinal\\_1\\_1.sav](http://www.arabbarometer.org/sites/default/files/ABI_datafilefinal_1_1.sav). Accessed November 2013.
  54. For index construction all of the questions from the block “505q” in the data were used, see details in [Appendix 2](#).
  55. Honaker et al., “Amelia II.”  
Missing data analysis was conducted prior to imputation. Summary statistics for the variables included in the analysis before and after the imputation are shown in Table A2.1 ([Appendix 2](#)). Little’s test conducted on the data used had shown that there is a certain pattern and it cannot be described as MCAR ( $p$ -value = 0.001). As there is no special test designed for distinguishing between MAR and NMAR, we have used some proxy methods, such as plotting missingness in Hmisc package in R and checking for dependencies for each variable using series of binary logistic regressions. According to the results of these tests, the missingness pattern can be described as MAR (missing at random), except for the fact that those people who skipped the questions on their attitudes toward democracy tend to skip each of the four questions on the issue.
  56. Scheepers et al., “Education, Religiosity and Moral Attitudes”; Adamczyk and Pitt, “Shaping Attitudes about Homosexuality.”
  57. At the first sight, it may seem that the question on reading the Quran is highly correlated with respondent’s literacy level. However, we see that the distribution of answers among the illiterate is quite similar to other groups. It has to do with the meaning of the expression “to read the Quran” (القرآن يقرأ) which means reciting and praying, not necessarily reading from a book. We also include a control for education in the regression analysis, thus comparing people with the same educational level.
  58. The dataset lacks a variable on age in years or on the year of birth, so those categories have not been chosen for any theoretical reason, but as the only option.
  59. For details see <http://www.arabbarometer.org/sites/default/files/files/FieldReports/FinalABI.pdf>
  60. Owen et al., “Zelig.”
  61. We set  $k$  (number of clusters) at 5 and fix the parameter of random starts at 100 to ensure stable results.
  62. Fienberg, *The Analysis of Cross-Classified Categorical Data*, 27–9.
  63. Hilbe, *Negative Binomial Regression*, 185–221.
  64. Bielefeldt, “‘Western’ Versus ‘Islamic’ Human Rights Conceptions?”
  65. Halliday, “Gorbachev and the ‘Arab Syndrome.’”
  66. For more on the formative period and stability of attitudes, see Alwin et al., *Political Attitudes over the Life Span*.
  67. Meneley, “Living Hierarchy in Yemen”; Colton, “Yemen.”
  68. Ponarin and Kostenko, “Attitude to Gender Equality in the Arab East.”

### Notes on contributors

Veronica V. Kostenko is Associate Professor of Sociology and Research Fellow at the Laboratory for Comparative Social Research, Higher School of Economics, Russia. Her research interests lie at the field of migration, integration, religiosity, and equality attitudes in comparative perspective.

Pavel A. Kuzmichev is Master student at the Lund University, Sweden. His fields of interest include democratization processes in post-Soviet countries, as well as the influence of technologies on humans in general and gender in particular, and transhumanism.

Eduard D. Ponarin is Professor of Sociology and Director of Laboratory for Comparative Social Research, Higher School of Economics, Russia. His research interests are social psychology, nationalism, religion, and applied statistics. He has published in *International Journal of Sociology*, *Demokratizatsiya*, *Europe-Asia Studies*, and *BMC Public Health*.

## Bibliography

- Abu Lughod, Lila. "Do Muslim Women Really Need Saving? Anthropological Reflections on Cultural Relativism and its Others." *American Anthropologist* 104, no. 3 (2002): 783–790.
- Abu-Habib, Lina. *Gender and Disability: Women's Experiences in the Middle East*. Oxford: Oxfam, 1997.
- Adamczyk, Amy, and Cassidy Pitt. "Shaping Attitudes about Homosexuality: The Role of Religion and Cultural Context." *Social Science Research* 38, no. 2 (2009): 338–351.
- Afary, Janet. "The human rights of Middle Eastern and Muslim women: a project for the 21st century." *Human Rights Quarterly* 26, no. 1 (2004): 106–125.
- Ahmed, Leila. *Women and Gender in Islam: Historical Roots of a Modern Debate*. New Haven: Yale University Press, 1992.
- Al-Ali, Nadie. "Gendering the Arab Spring." *Middle East Journal of Culture and Communication* 5, no. 1 (2012): 26–31.
- Alexander, Amy, and Christian Welzel. "Empowering women: the role of eman-." *European Sociological Review* 27, no. 3 (2011): 364–384.
- Alexander, Amy, and Christian Welzel. "Islam and patriarchy: how robust is Muslim support for patriarchal values?" *International Review of Sociology* 21, no. 2 (2011): 249–276.
- Alexander, Jeffrey C. *Theoretical Logic in Sociology. Vol. 1, Positivism, Presuppositions, and Current Controversies*. Berkeley: University of California Press, 1982.
- Al-Mughni, Haya, and Marry Ann Tetreault. "Citizenship, Gender and the Politics of Quasi States." In *Gender and Citizenship in the Middle East*, edited by Joseph Suad, 237–260. Syracuse, NY: Syracuse University Press, 2000.
- Alwin, Duane, Ronald Cohen, and Theodore Newcomb. *Political Attitudes over the Life Span: The Bennington Women After Fifty Years*. Madison, WI: University of Wisconsin Press, 1991.
- Baskan, Birol. "The State in the Pulpit: State Incorporation of Religious Institutions in the Middle East." *Politics and Religion* 4 (2011): 136–153.
- Bellin, Eva. "Reconsidering the Robustness of Authoritarianism in the Middle East: Lessons from the Arab Spring." *Comparative Politics* 44, no. 2 (2012): 127–149.
- Bergh, Johannes. "Gender Attitudes and Modernization Processes." *International Journal of Public Opinion Research* 19, no. 1 (2007): 5–23.
- Bielefeldt, Heiner. "Muslim Voices in the Human Rights Debate." *Human Rights Quarterly* 17 (1995): 587–617.
- Bielefeldt, Heiner. "Western" versus "Islamic" Human Rights Conceptions? A Critique of Culturalism Essentialism in the Discussion on Human Rights." *Political Theory* 28, no. 1 (2000): 90–121.
- Blaydes, Lisa, and Drew Linzer. "The Political Economy of Women's Support for Fundamentalist Islam." *World Politics* 60, no. 4 (2008): 576–609.
- Charrad, Mounira. "Gender in the Middle East: Islam, State, Agency." *Annual Review of Sociology* 37 (2011): 417–437.
- Charrad, Mounira. "Kinship, Islam, or Oil: Culprits of Gender Inequality?" *Politics and Gender* 5, no. 4 (2009): 546–553.
- Chaturvedi and Montoya. "Democracy, Oil, or Religion? Expanding Women's Rights in the Muslim World." *Politics and Religion* 6, no. 3 (2013): 596–617.

- Cherif, Feryal. "Culture, Rights, and Norms. Women's Rights Reform in Muslim Countries." *The Journal of Politics* 72, no. 4 (2010): 1144–1160.
- Ciftci, Sabri. "Modernization, Islam, or Social Capital: What Explains Attitudes Toward Democracy in the Muslim World?" *Comparative Political Studies* 43, no. 11 (2010): 1442–1470.
- Colton, Nora Ann. "Yemen: A Collapsed Economy." *The Middle East Journal* 64, no. 3 (2010): 410–426.
- Cooke, Miriam. "Women, Religion, and the Postcolonial Arab World." *Cultural Critique* 45 (2000): 150–184.
- Ehteshami, Anoushiravan. "Is the Middle East Democratizing?" *British Journal of Middle Eastern Studies* 26, no. 2 (1999): 199–217.
- Fienberg, Stephen. *The Analysis of Cross-Classified Categorical Data*. 2nd edition. New York, NY: Springer, 2007.
- Filali-Ansary, Abdou. "The Languages of the Arab Revolution." *Journal of Democracy* 23, no. 2 (2012): 5–18.
- Fish, Steven. "Islam and Authoritarianism." *World Politics* 55, no. 1 (2002): 4–37.
- Golley, Nawar Al-Hassan. "Is Feminism Relevant to Arab Women?" *Third World Quarterly* 25, no. 3 (2004): 521–536.
- Halliday, Fred. "Gorbachev and the "Arab Syndrome": Soviet policy in the Middle East." *World Policy Journal* 4, no. 3 (1987): 415–442.
- Hassan, Riffat. "Feminist theology: The challenges for Muslim women." *Critique: Journal for Critical Studies of the Middle East* 5, no. 9 (1996): 53–65.
- Hilbe, Joseph. *Negative Binomial Regression*. Cambridge: Cambridge University Press, 2011.
- Hilsdon, Anne-Marie, and Santi Rozario. "Special Issue on Islam, Gender and Human Rights." *Women's Studies International Forum* 29, no. 4 (2006): 331–338.
- Honaker, James, Gary King, Matthew Blackwell, et al. "Amelia II: A Program for Missing Data." *Journal of Statistical Software* 45, no. 7 (2011): 1–47.
- Huntington, Samuel. *The Clash of Civilizations and the Remaking of World Order*. India: Penguin Books, 1996.
- Inglehart, Ronald. *Islam, Gender, Culture, and Democracy: Findings from the World Values Survey and the European Values Survey*. Ontario: De Sitter Publications, 2003.
- Inglehart, Ronald. *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies*. Cambridge: Cambridge University Press, 1997.
- Inglehart, Ronald, and Christian Welzel. "Liberalism, Post-materialism, and the Growth of Freedom: the Human Development Perspective." *International Review of Sociology* 15, no. 1 (2005): 81–108.
- Inglehart, Ronald, and Christian Welzel. *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. Cambridge: Cambridge University Press, 2005.
- Inglehart, Ronald, and Pippa Norris. *Rising Tide: Gender Equality and Cultural Change Around the World*. Cambridge: Cambridge University Press, 2003.
- Inglehart, Ronald, and Pippa Norris. "The true clash of civilizations." *Foreign Policy* 135 (2003): 63–70.
- Jamal, Amaney. "Reassessing Support for Islam and Democracy in the Arab World: Evidence from Egypt and Jordan." *World Affairs* 169, no. 2 (2006): 51–63.
- Jamal, Amaney, and Mark Tessler. "Attitudes in the Arab world." *Journal of Democracy* 19, no. 1 (2008): 97–110.
- Kandiyoti, Deniz. *Women, Islam, and the state*. Philadelphia, PA: Temple University Press, 1991.
- Keddie, Nikki. *Women in the Middle East: Past and Present*. Princeton, NJ: Princeton University Press, 2007.



- Kuhn, Randall. "On the Role of Human Development in the Arab Spring." *Population and Development Review* 38, no. 4 (2012): 649–683.
- Luong, Pauline Jones, and Erika Weintal. *Oil is Not a Curse: Ownership Structure and Institutions in Soviet successor states*. Cambridge: Cambridge University Press, 2010.
- Mayer, Ann Elizabeth. *Islam and Human Rights: Tradition and Politics*. Boulder, CO: Westview Press, 1999.
- Meneley, Anne. "Living Hierarchy in Yemen." *Anthropologica* 42 (2000): 61–73.
- Moghadam, Valentine. *Globalization and Social Movements: Islamism, Feminism, and the Global Justice Movement*. Lanham, MD: Rowman and Little, 2012.
- Moghadam, Valentine. *Modernizing Women: Gender and Social Change in the Middle East*. Boulder, CO: Lynne Rienner Publishers, 2003.
- Moghadam, Valentine. "The Women's Movement in the Middle East and North Africa: Responding to Restructuring and Fundamentalism." *Women's Studies Quarterly* 26, no. 3 (1998): 57–67.
- Mule, Pat, and Diane Barthel. "The Return to the Veil. Individual Autonomy vs. Social Esteem." *Sociological Forum* (Sociological Forum) 7, no. 2 (1992): 323–332.
- Norris, Pippa, and Ronald Inglehart. *Sacred and secular: Religion and Politics Worldwide*. Cambridge: Cambridge University Press, 2011 [2004].
- Owen, Matt, Imai Kosuke, Gary King, et al. "Zelig: Everyone's Statistical Software." *R package version*, no. 1 (2013): 4–100.
- Paxton, Pamela, and Sheri Kunovich. "Women's Political Representation: The Importance of Ideology." *Social Forces* 82, no. 1 (2003): 87–113.
- Ponarin, Eduard, and Veronica Kostenko. "Attitude and Gender Equality in the Arab East." *Journal of Siberian Federal University. Humanities and Social Sciences* 6, no. 12 (2013): 1838–1846.
- Read, Jennan Ghazal. "The Sources of Gender Role Attitudes Among Christian and Muslim Arab-American Women." *Sociology of Religion* 64, no. 2 (2003): 207–222.
- Ritzer, George. "Micro-Macro Linkage in Sociological Theory: Applying a Metatheoretical Tool." In *Frontiers of Social Theory: The New Syntheses*, edited by G. Ritzer, 347–370. New York: Columbia University Press, 1990.
- Rizzo, Helen, Abdel-Hamid Abdel-Latif, and Katherine Meyer. "The Relationship Between Gender Equality and Democracy. A comparison of Arab versus non-Arab Muslim societies." *Sociology* 41, no. 6 (2007): 1151–1170.
- Ross, Michael. "Oil, Islam, and Women." *American Political Science Review* 102, no. 1 (2008): 107–123.
- Rowley, Charles, and Nathaniel Smith. "Islam democracy paradox. Muslims Claim to Like Democracy, so Why do they have so Little?" *Public Choice* 139, no. 3–4 (2009): 273–299.
- Scheepers, Peer, Manfred Te Grotenhuis, and Frans Van Der Slik. "Education, Religiosity and Moral Attitudes: Explaining Cross-National Effect Differences." *Sociology of Religion* 63, no. 2 (2002): 157–176.
- Spierings, Niels, Jeroen Smits, and Mieke Verloo. "Micro- and Macro-level Determinants of Women's Employment in Six Arab Countries." *Journal of Marriage and Family* 72, no. 5 (2010): 1391–1407.
- Spierings, Niels, Jeroen Smits, and Mieke Verloo. "On the Compatibility of Islam and Gender Equality." *Social Indicators Research* 90, no. 3 (2009): 503–522.
- Stockemer, Daniel. "Women's Descriptive Representation in Developed and Developing Countries." *International Political Science Review* (2014). doi: 10.1177/0192512113513966.
- Tessler, Mark. "Islam and Democracy in the Middle East: The Impact of Religious Orientations on Attitudes Toward Democracy in four Arab Countries." *Comparative politics* 34, no. 3 (2002): 337–354.

- Tessler, Mark, and Amaney Jamal. "Political Attitude Research in the Arab World: Emerging Opportunities." *Political Science and Politics* 39, no. 3 (2006): 433–447.
- Tessler, Mark, and Ina Warriner. "Gender, Feminism, and Attitudes Toward International Conflict: Exploring Relationships with Survey Data from the Middle East." *World Politics* 49, no. 2 (1997): 250–281.
- Tetreault, Mary Ann. *The Kuwait Petroleum Corporation and the Economics of the New World Order*. Westport, Conn: Quorum Books, 1995.
- Tetreault, Mary Ann, and Haya al-Mughni. "Gender, Citizenship and Nationalism in Kuwait." *British Journal of Middle Eastern Studies* 22, no. 1–2 (1995): 64–80.
- Yeganeh, Hamid, and Diane May. "Cultural Values and Gender Gap: A Cross-National Analysis." *Gender in Management: An International Journal* 26, no. 2 (2011): 106–121.
- Welzel, Christian. *Freedom Rising*. Cambridge: Cambridge University Press, 2013.
- Wise, Tim. *White Like Me: Reflections on Race from a Privileged Son*. Berkeley: Soft Skull Press, 2004.

## Appendix 1. Items for index construction

*Gender equality index (all items have the same weight)*

- A woman can be a president or prime minister of a Muslim country
- A married woman can work outside the home if she wishes
- On the whole, men make better political leaders than women (inverse)
- A university education is more important for a boy than a girl (inverse)
- Men and women should have equal job opportunities and wages
- Men and women should receive equal wages and salaries
- A woman can travel abroad by herself if she wishes

*Perception of democracy index (all items have the same weight)*

- In a democracy, the economy runs badly (inverse)
- Democracies are indecisive and have too much quibbling (inverse)
- Democracies are not good at maintaining order (inverse)
- Democracy may have its problems but is better than any other form of government

Appendix 2.

Table A2.1. Summary statistics of the variables included in the analysis before and after imputation.

|  | Algeria     | Jordan      | Kuwait      | Lebanon     | Morocco     | Palestine   | Yemen       |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Woman_president_before imp.                      | 2.28 (1.08) | 2.80 (0.93) | 2.44 (1.02) | 3.21 (0.88) | 2.87 (1.06) | 2.57 (0.94) | 2.10 (0.99) |
| after imputation                                 | 2.29 (1.09) | 2.78 (0.95) | 2.45 (1.01) | 3.20 (0.88) | 2.87 (1.06) | 2.58 (0.94) | 2.10 (0.99) |
| Married woman_can work_before imp.               | 2.91 (0.91) | 3.01 (0.79) | 3.25 (0.68) | 3.42 (0.76) | 2.93 (0.97) | 3.06 (0.69) | 2.76 (0.88) |
| after imputation                                 | 2.91 (0.92) | 3.01 (0.80) | 3.24 (0.69) | 3.42 (0.76) | 2.93 (0.97) | 3.06 (0.69) | 2.76 (0.89) |
| Men better polleaders (inv.)_before imp.         | 1.89 (0.90) | 1.84 (0.83) | 1.94 (0.97) | 2.39 (1.03) | 2.34 (0.99) | 1.72 (0.77) | 1.73 (0.78) |
| after imputation                                 | 1.89 (0.91) | 1.84 (0.84) | 1.94 (0.97) | 2.39 (1.03) | 2.34 (1.00) | 1.72 (0.78) | 1.75 (0.79) |
| University important for boys (inv.)_before imp. | 3.09 (0.93) | 2.71 (0.96) | 3.18 (0.83) | 3.45 (0.79) | 2.91 (0.88) | 2.92 (0.91) | 2.62 (0.93) |
| after imputation                                 | 3.08 (0.94) | 2.72 (0.96) | 3.18 (0.83) | 3.45 (0.79) | 2.90 (0.89) | 2.92 (0.92) | 2.62 (0.93) |
| Men and women_equal job opport._before imp.      | 2.82 (0.94) | 2.81 (0.86) | 3.20 (0.78) | 3.29 (0.81) | 3.06 (0.90) | 2.96 (0.78) | 2.52 (0.87) |
| after imputation                                 | 2.80 (0.96) | 2.81 (0.86) | 3.19 (0.79) | 3.28 (0.81) | 3.06 (0.91) | 2.96 (0.78) | 2.53 (0.88) |
| Men and women_equal wages_before imp.            | 3.21 (0.84) | 3.05 (0.79) | 3.22 (0.87) | 3.44 (0.74) | 3.33 (0.81) | 3.17 (0.75) | 3.01 (0.86) |
| after imputation                                 | 3.18 (0.86) | 3.05 (0.79) | 3.22 (0.87) | 3.44 (0.74) | 3.32 (0.82) | 3.17 (0.75) | 2.98 (0.87) |
| Woman can travel by her own_before imp.          | 2.04 (1.03) | 2.06 (0.97) | 2.36 (0.98) | 2.99 (1.03) | 2.38 (1.09) | 2.04 (0.89) | 1.57 (0.79) |
| after imputation                                 | 2.05 (1.03) | 2.06 (0.97) | 2.36 (0.98) | 2.99 (1.03) | 2.38 (1.09) | 2.04 (0.89) | 1.58 (0.81) |
| In dem. economy runs badly (inv.)_before imp.    | 2.66 (0.90) | 2.66 (0.80) | 2.81 (0.83) | 2.97 (0.90) | 3.29 (0.76) | 2.62 (0.86) | 2.56 (0.92) |
| after imputation                                 | 2.67 (0.95) | 2.66 (0.85) | 2.78 (0.86) | 2.97 (0.90) | 3.24 (0.82) | 2.62 (0.87) | 2.54 (0.94) |
| Democracies are indecisive (inv.)_before imp.    | 2.40 (0.89) | 2.50 (0.80) | 2.60 (0.88) | 2.54 (0.96) | 3.13 (0.82) | 2.42 (0.80) | 2.37 (0.87) |
| after imputation                                 | 2.41 (0.94) | 2.49 (0.85) | 2.59 (0.89) | 2.55 (0.97) | 3.05 (0.88) | 2.42 (0.81) | 2.38 (0.92) |
| Dem. are not good maint.order (inv.)_before imp. | 2.59 (0.89) | 2.69 (0.83) | 2.73 (0.80) | 3.01 (0.81) | 3.27 (0.74) | 2.58 (0.80) | 2.72 (0.84) |
| after imputation                                 | 2.61 (0.91) | 2.66 (0.88) | 2.73 (0.83) | 3.00 (0.81) | 3.22 (0.79) | 2.57 (0.81) | 2.67 (0.90) |
| Dem is the best form of gov._before imp.         | 3.09 (0.82) | 3.14 (0.71) | 3.22 (0.72) | 3.39 (0.67) | 3.45 (0.74) | 3.04 (0.74) | 3.00 (0.83) |
| after imputation                                 | 3.08 (0.85) | 3.14 (0.74) | 3.20 (0.76) | 3.38 (0.69) | 3.42 (0.77) | 3.03 (0.76) | 3.01 (0.86) |
| Trust to other people_before imp.                | 1.80 (0.40) | 1.66 (0.48) | 1.77 (0.42) | 1.84 (0.37) | 1.80 (0.40) | 1.60 (0.49) | 1.58 (0.49) |
| after imputation                                 | 1.78 (0.41) | 1.65 (0.48) | 1.76 (0.43) | 1.84 (0.37) | 1.80 (0.40) | 1.60 (0.49) | 1.60 (0.49) |
| Trust to prime minister_before imp.              | 2.65 (1.08) | 2.14 (1.00) | 2.41 (0.95) | 3.10 (1.16) | 2.72 (1.11) | 2.19 (1.10) | 2.88 (1.05) |
| after imputation                                 | 2.67 (1.08) | 2.17 (1.02) | 2.43 (0.97) | 3.09 (1.16) | 2.71 (1.12) | 2.20 (1.10) | 2.85 (1.07) |
| Political Interest_before imp.                   | 2.91 (0.91) | 3.03 (0.97) | 2.56 (0.86) | 2.34 (1.06) | 3.04 (0.96) | 2.45 (1.09) | 2.84 (0.95) |
| after imputation                                 | 2.90 (0.93) | 3.03 (0.97) | 2.56 (0.87) | 2.34 (1.06) | 3.03 (0.97) | 2.46 (1.09) | 2.86 (0.96) |
| Income_before imp.                               | 5.30 (2.93) | 5.30 (2.94) | 5.24 (2.81) | 5.39 (2.98) | 6.43 (2.59) | 5.22 (2.82) | 5.27 (2.98) |
| after imputation                                 | 5.28 (2.91) | 5.31 (2.94) | 5.23 (2.88) | 5.60 (2.96) | 6.36 (2.62) | 5.26 (2.83) | 5.17 (2.93) |

Note: Means (or medians) stand first, standard deviations are in brackets.

Downloaded by [82.196.92.105] at 06:20 16 July 2015

## Appendix 3. Regression tables.

Table A3.1. OLS regressions on gender equality index with controls on trust and income.

| <i>Dependent variable:</i>                             |                 |                    |                         |
|--|-----------------|--------------------|-------------------------|
| Gender Equality Index                                  |                 |                    |                         |
|  | Default<br>(1)  | With Income<br>(2) | Income and Trust<br>(3) |
| Age 18–24  | baseline        | baseline           | baseline                |
| Age 25–34  | –0.01 (0.01)    | –0.01 (0.01)       | –0.01* (0.01)           |
| Age 35–44  | 0.01 (0.01)     | 0.01 (0.01)        | 0.01 (0.01)             |
| Age 45–54  | 0.01** (0.01)   | 0.01 (0.01)        | 0.01 (0.01)             |
| Age 55–64  | 0.04*** (0.01)  | 0.03*** (0.01)     | 0.03*** (0.01)          |
| Age 65 and older                                       | 0.04*** (0.01)  | 0.04*** (0.01)     | 0.04*** (0.01)          |
| Illiterate   | baseline        | baseline           | baseline                |
| Primary Education                                      | 0.05*** (0.01)  | 0.05*** (0.01)     | 0.05*** (0.01)          |
| Secondary Education                                    | 0.08*** (0.01)  | 0.07*** (0.01)     | 0.07*** (0.01)          |
| 2-year College   | 0.10*** (0.01)  | 0.09*** (0.01)     | 0.09*** (0.01)          |
| Bachelor   | 0.12*** (0.01)  | 0.11*** (0.01)     | 0.10*** (0.01)          |
| Master or higher                                       | 0.14*** (0.01)  | 0.13*** (0.01)     | 0.13*** (0.01)          |
| gender (female)  | 0.12*** (0.004) | 0.12*** (0.004)    | 0.12*** (0.004)         |
| Yemen  | baseline        | baseline           | baseline                |
| Jordan   | 0.09*** (0.01)  | 0.09*** (0.01)     | 0.09*** (0.01)          |
| Palestine  | 0.10*** (0.01)  | 0.10*** (0.01)     | 0.10*** (0.01)          |
| Algeria  | 0.07*** (0.01)  | 0.07*** (0.01)     | 0.08*** (0.01)          |
| Morocco  | 0.18*** (0.01)  | 0.17*** (0.01)     | 0.17*** (0.01)          |
| Kuwait   | 0.16*** (0.01)  | 0.16*** (0.01)     | 0.16*** (0.01)          |
| Lebanon  | 0.27*** (0.01)  | 0.27*** (0.01)     | 0.26*** (0.01)          |
| Reading Quran: often                                   | baseline        | baseline           | baseline                |
| Reading Quran: sometimes                               | 0.02*** (0.005) | 0.02*** (0.005)    | 0.02*** (0.005)         |
| Reading Quran: rare and don't read                     | 0.04*** (0.01)  | 0.04*** (0.01)     | 0.05*** (0.01)          |
| Income (decile)  |                 | 0.01*** (0.001)    | 0.005*** (0.001)        |
| trust: People can be trusted                           |                 |                    | baseline                |
| trust: You must be very careful in dealing with people |                 |                    | –0.001 (0.004)          |
| trust to PM: A great deal of trust                     |                 |                    | baseline                |
| trust to PM: Quite a lot of trust                      |                 |                    | 0.001 (0.01)            |
| trust to PM: Not very much trust                       |                 |                    | 0.004 (0.01)            |
| trust to PM: None at all                               |                 |                    | 0.01* (0.01)            |
| Very interested in politics                            |                 |                    | baseline                |
| Interested in politics                                 |                 |                    | –0.02** (0.01)          |
| Little interest in politics                            |                 |                    | –0.03*** (0.01)         |
| Not interested in politics                             |                 |                    | –0.04*** (0.01)         |
| Constant   | 0.18*** (0.01)  | 0.15*** (0.01)     | 0.17*** (0.01)          |
| Observations   | 8,122           | 8,122              | 8,122                   |
| R <sup>2</sup>   | 0.26            | 0.26               | 0.27                    |
| Adjusted R <sup>2</sup>                                | 0.25            | 0.26               | 0.26                    |

(Continued)

Table A3.1. Continued.

| <i>Dependent variable:</i> |                                      |                                      |                                      |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Gender Equality Index      |                                      |                                      |                                      |
|                            | Default<br>(1)                       | With Income<br>(2)                   | Income and Trust<br>(3)              |
| Residual Std. Error        | 0.18<br>( <i>df</i> = 8102)          | 0.17<br>( <i>df</i> = 8101)          | 0.17<br>( <i>df</i> = 8094)          |
| F Statistic                | 146.77***<br>( <i>df</i> = 19; 8102) | 143.09***<br>( <i>df</i> = 20; 8101) | 108.14***<br>( <i>df</i> = 27; 8094) |

\**p* < 0.1.\*\**p* < 0.05.\*\*\**p* < 0.01.

Table A3.2. Negative binomial regression of counts on gender, age, education, and clusters.

| <i>Dependent variable:</i>  |                   |
|---|-------------------|
| Number of respondents in a cluster<br>by gender, age, and education |                   |
| gender2   | 0.678*** (0.201)  |
| clusterA  | -0.140 (0.206)    |
| clusterB  | -1.259*** (0.228) |
| clusterC  | 0.025 (0.204)     |
| clusterD  | 0.627*** (0.202)  |
| agecombined25-34  | 1.127*** (0.267)  |
| agecombined35-44  | 1.621*** (0.261)  |
| agecombined45-54  | 2.052*** (0.259)  |
| agecombined55-64  | 2.190*** (0.264)  |
| agecombined65 and older   | 1.978*** (0.272)  |
| educPrimary   | 2.882*** (0.299)  |
| educSecondary   | 3.190*** (0.303)  |
| educ2-year college  | 1.874*** (0.320)  |
| educBA  | 2.690*** (0.309)  |
| educMA or higher  | 0.680* (0.369)    |
| gender2:clusterA  | 0.611*** (0.161)  |
| gender2:clusterB  | 0.997*** (0.168)  |
| gender2:clusterC  | 0.384** (0.157)   |
| gender2:clusterD  | -0.525*** (0.165) |
| gender2:agecombined25-34  | -0.088 (0.161)    |
| gender2:agecombined35-44  | -0.210 (0.163)    |
| gender2:agecombined45-54  | -0.526*** (0.171) |
| gender2:agecombined55-64  | -0.956*** (0.194) |
| gender2:agecombined65 and older                                     | -1.192*** (0.221) |
| gender2:educPrimary   | -0.637*** (0.163) |

(Continued)

Table A3.2. Continued.

|  | <i>Dependent variable:</i><br>Number of respondents in a cluster<br>by gender, age, and education |
|--|---|
| gender2:educSecondary                      | -0.815*** (0.173)   |
| gender2:educ2-year college                 | -0.854*** (0.188)   |
| gender2:educBA                             | -1.044*** (0.178)   |
| gender2:educMA or higher                   | -1.544*** (0.225)   |
| clusterA:educPrimary                       | -0.226 (0.252)  |
| clusterB:educPrimary                       | 0.418 (0.268)   |
| clusterC:educPrimary                       | 0.284 (0.249)   |
| clusterD:educPrimary                       | -0.558** (0.251)  |
| clusterA:educSecondary                     | -0.453* (0.264)   |
| clusterB:educSecondary                     | 0.417 (0.279)   |
| clusterC:educSecondary                     | 0.296 (0.258)   |
| clusterD:educSecondary                     | -0.725*** (0.263)   |
| clusterA:educ2-year college                | -0.570** (0.284)  |
| clusterB:educ2-year college                | 0.328 (0.298)   |
| clusterC:educ2-year college                | 0.158 (0.274)   |
| clusterD:educ2-year college                | -0.905*** (0.285)   |
| clusterA:educBA                            | 0.109 (0.270)   |
| clusterB:educBA                            | 0.765*** (0.287)  |
| clusterC:educBA                            | 0.550** (0.266)   |
| clusterD:educBA                            | -0.502* (0.272)   |
| clusterA:educMA or higher                  | 0.729** (0.324)   |
| clusterB:educMA or higher                  | 0.520 (0.369)   |
| clusterC:educMA or higher                  | 0.284 (0.331)   |
| clusterD:educMA or higher                  | -0.635* (0.352)   |
| agecombined25-34:educPrimary               | -0.729** (0.304)  |
| agecombined35-44:educPrimary               | -1.337*** (0.300)   |
| agecombined45-54:educPrimary               | -2.038*** (0.299)   |
| agecombined55-64:educPrimary               | -2.705*** (0.305)   |
| agecombined65 and older:educPrimary        | -2.776*** (0.313)   |
| agecombined25-34:educSecondary             | -1.285*** (0.305)   |
| agecombined35-44:educSecondary             | -1.909*** (0.301)   |
| agecombined45-54:educSecondary             | -2.833*** (0.303)   |
| agecombined55-64:educSecondary             | -4.003*** (0.324)   |
| agecombined65 and older:educSecondary      | -4.457*** (0.355)   |
| agecombined25-34:educ2-year college        | -0.319 (0.317)  |
| agecombined35-44:educ2-year college        | -1.115*** (0.315)   |
| agecombined45-54:educ2-year college        | -2.219*** (0.323)   |
| agecombined55-64:educ2-year college        | -3.566*** (0.372)   |
| agecombined65 and older:educ2-year college | -4.530*** (0.496)   |
| agecombined25-34:educBA                    | -0.684** (0.306)  |
| agecombined35-44:educBA                    | -1.754*** (0.303)   |
| agecombined45-54:educBA                    | -2.988*** (0.310)   |
| agecombined55-64:educBA                    | -4.040*** (0.336)   |
| agecombined65 and older:educBA             | -5.084*** (0.422)   |

(Continued)

Table A3.2. Continued.

|  | <i>Dependent variable:</i><br>Number of respondents in a cluster<br>by gender, age, and education |
|--|---|
| agecombined25–34:educMA or higher        | –0.087 (0.349)  |
| agecombined35–44:educMA or higher        | –1.233*** (0.357)   |
| agecombined45–54:educMA or higher        | –2.311*** (0.381)   |
| agecombined55–64:educMA or higher        | –3.725*** (0.496)   |
| agecombined65 and older:educMA or higher | –4.138*** (0.610)   |
| Constant                                 | –0.961*** (0.260)   |
| Observations                             | 2,520   |
| Log Likelihood                           | –4,712.229  |
| theta                                    | 1.050*** (0.051)  |
| Akaike Inf. Crit.                        | 9,574.458   |

\* $p < 0.1$ .\*\* $p < 0.05$ .\*\*\* $p < 0.01$ .

Table A3.3. Negative binomial regression of counts on countries and clusters.

|                           | <i>Dependent variable:</i><br>Number of respondents in a cluster by country |
|---------------------------|---|
| clusterA                  | -1.843*** (0.344)   |
| clusterB                  | -1.513*** (0.337)   |
| clusterC                  | -0.328 (0.325)  |
| clusterD                  | -0.190 (0.325)  |
| countryJordan             | -0.568* (0.327)   |
| countryPalestine          | -0.184 (0.325)  |
| countryAlgeria            | -0.096 (0.324)  |
| countryMorocco            | -1.843*** (0.344)   |
| countryKuwait             | -1.376*** (0.335)   |
| countryLebanon            | -1.595*** (0.338)   |
| clusterA:countryJordan    | 1.100** (0.481)   |
| clusterB:countryJordan    | 1.160** (0.473)   |
| clusterC:countryJordan    | 0.896* (0.461)  |
| clusterD:countryJordan    | 0.237 (0.462)   |
| clusterA:countryPalestine | 0.590 (0.481)   |
| clusterB:countryPalestine | 0.826* (0.472)  |
| clusterC:countryPalestine | 0.751 (0.459)   |
| clusterD:countryPalestine | -0.577 (0.463)  |
| clusterA:countryAlgeria   | 1.067** (0.476)   |
| clusterB:countryAlgeria   | 0.906* (0.470)  |
| clusterC:countryAlgeria   | 0.258 (0.460)   |
| clusterD:countryAlgeria   | -0.312 (0.461)  |
| clusterA:countryMorocco   | 3.821*** (0.485)  |
| clusterB:countryMorocco   | 1.979*** (0.489)  |
| clusterC:countryMorocco   | 2.007*** (0.474)  |
| clusterD:countryMorocco   | 1.752*** (0.473)  |
| clusterA:countryKuwait    | 1.997*** (0.486)  |
| clusterB:countryKuwait    | 1.755*** (0.481)  |
| clusterC:countryKuwait    | 1.302*** (0.468)  |
| clusterD:countryKuwait    | 0.425 (0.472)   |
| clusterA:countryLebanon   | 3.507*** (0.482)  |
| clusterB:countryLebanon   | 2.659*** (0.479)  |
| clusterC:countryLebanon   | 1.791*** (0.470)  |
| clusterD:countryLebanon   | 0.074 (0.481)   |
| Constant                  | 5.308*** (0.229)  |
| Observations              | 70  |
| Log Likelihood            | -343.031  |
| Theta                     | 10.009*** (1.941)   |
| Akaike Inf. Crit.         | 756.062   |

\* $p < 0.1$ .\*\* $p < 0.05$ .\*\*\* $p < 0.01$ .